

Proposed claim 1:

1- A method of TPSF-based optical imaging comprising the steps of:

injecting light at a plurality of wavelengths into an object to be imaged at one or more injection positions; and

~~detecting~~ collecting the injected light after diffusing in the object at one or more detection positions;

spectrally separating said collected light into individual wavelengths signals;

directing individual wavelength signals at distinct locations on a CCD camera;

simultaneously detecting said individual wavelength signals ~~for the plurality of wavelengths~~ to obtain separate TPSF-based data for each of the wavelengths; and

wherein said separating and said detecting preserves time-based information of each individual wavelength signal.